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November 25, 2019

VIA ELECTRONIC FILING

The Honorable Jocelyn G. Boyd
Chief Clerk/Administrator
Public Service Commission of South Carolina
101 Executive Center Drive, Suite 100
Columbia, South Carolina 29210

**RE: Duke Energy Progress, LLC- Monthly Power Plant Performance Report
Docket No. 2006-224-E**

Dear Ms. Boyd:

Pursuant to the Commission's Orders in Docket No. 1977-354-E, enclosed for filing is the Monthly Power Plant Performance Report in Docket No. 2006-224-E for the month of October 2019.

Sincerely,

Heather Shirley Smith

Enclosures

cc: Ms. Dawn Hipp, Office Regulatory Staff
Ms. Nanette Edwards, Office Regulatory Staff
Mr. Jeff Nelson, Office Regulatory Staff
Mr. Michael Seaman-Huynh, Office Regulatory Staff
Staff Mr. Ryder Thompson, Office Regulatory Staff
Mr. Scott Elliott, Elliott & Elliott, P.A.
Mr. Garrett Stone, Brickfield, Burchette, Ritts & Stone, PC
Mr. Gary Walsh, Walsh Consulting, LLC

**Duke Energy Progress
Base Load Power Plant Performance Review Plan**

Period: October, 2019

Station	Unit	Date of Outage	Duration of Outage	Scheduled / Unscheduled	Cause of Outage	Reason Outage Occurred	Remedial Action Taken
Brunswick	1	None					
	2	None					
Harris	1	10/12/2019 - 11/01/2019	477.87	Scheduled	End-of-cycle 22 refueling outage	Planned refueling outage.	Planned refueling outage.
Robinson	2	None					

**Duke Energy Progress
Base Load Power Plant
Performance Review Plan
October 2019**

Lee Energy Complex

Unit	Duration of Outage	Type of Outage	Cause of Outage	Reason Outage Occurred	Remedial Action Taken
1A	10/31/2019 5:38:00 AM To 10/31/2019 5:41:00 AM	Unsch	5130 Gas Turbine - Starting System (including Motor)	After purge completed 01A SFC caused a un fired abort.	
1A	10/31/2019 5:41:00 AM To 10/31/2019 5:58:00 AM	Unsch	5130 Gas Turbine - Starting System (including Motor)	Unit was unavailable after a failed start.	
1A	10/31/2019 5:58:00 AM To 10/31/2019 6:04:00 AM	Unsch	5050 Gas Turbine – Ignition System	Unit failed to ignite on start up.	
1A	10/31/2019 6:04:00 AM To 10/31/2019 6:52:00 AM	Unsch	5050 Gas Turbine – Ignition System	Unit was unavailable after a failed start.	
1B	10/28/2019 5:37:00 AM To 10/28/2019 5:51:00 AM	Unsch	5130 Gas Turbine - Starting System (including Motor)	After purge completed 01A SFC caused a un fired abort. Swapped to 01C SFC.	
1C	10/26/2019 5:21:00 PM To 10/26/2019 8:20:00 PM	Unsch	8730 Cems - Co Analyzer Problems	Power Supply on CO analyzer failed.	
1C	10/28/2019 1:43:00 PM To 10/28/2019 2:10:00 PM	Unsch	5130 Gas Turbine - Starting System (including Motor)	Started with 01A SFC failed after completing purge.	
ST1	10/26/2019 1:31:00 AM To 11/1/2019 12:00:00 AM	Sch	4240 Lp Turbine Bearings	Inspect and Repair Bearings #3, #4, and #5.	

Mayo Station

Unit	Duration of Outage	Type of Outage	Cause of Outage	Reason Outage Occurred	Remedial Action Taken
1	10/8/2019 12:34:00 AM To 10/12/2019 12:00:00 AM	Sch	1060 First Reheater Leaks	1A Boiler Reheat outlet header tube leak.	
1	10/26/2019 11:00:00 PM To 11/1/2019 12:00:00 AM	Sch	0510 Main Steam Relief/Safety Valves	Power control valve replacement during capital project outage.	

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.

**Duke Energy Progress
Base Load Power Plant
Performance Review Plan
October 2019**

Richmond County Station

Unit	Duration of Outage	Type of Outage	Cause of Outage		Reason Outage Occurred	Remedial Action Taken
9	10/5/2019 3:52:00 AM To 10/10/2019 10:59:00 AM	Sch	4293	Turbine Hydraulic System Pipes And Valves	Fall full block outage for ST5 MSCV issues.	
9	10/10/2019 11:21:00 AM To 10/11/2019 8:26:00 AM	Sch	5041	Gas Turbine - Fuel Piping And Valves	Fuel oil leak on can 14	
9	10/11/2019 1:19:00 PM To 10/11/2019 8:30:00 PM	Sch	5041	Gas Turbine - Fuel Piping And Valves	Fuel oil leak on can 14	
9	10/12/2019 1:16:00 AM To 10/12/2019 9:13:00 AM	Sch	5075	Blade Path Temperature Spread	High bladepath spread.	
9	10/12/2019 9:48:00 AM To 10/16/2019 3:50:00 PM	Sch	5075	Blade Path Temperature Spread	Siemens warranty work to replace 4 support housings.	
10	10/5/2019 3:53:00 AM To 10/11/2019 3:38:00 PM	Sch	4293	Turbine Hydraulic System Pipes And Valves	Fall full block outage for ST5 MSCV issues.	
ST5	10/5/2019 3:41:00 AM To 10/12/2019 12:57:00 AM	Sch	4293	Turbine Hydraulic System Pipes And Valves	Fall full block outage for ST5 MSCV issues.	

Roxboro Station

Unit	Duration of Outage	Type of Outage	Cause of Outage		Reason Outage Occurred	Remedial Action Taken
2	10/19/2019 12:00:00 AM To 11/2/2019 11:05:00 PM	Sch	1801	Minor Boiler Overhaul (less than 720 Hours)	Maintenance Outage	
3	10/7/2019 7:00:00 AM To 10/27/2019 1:39:00 AM	Sch	1800	Major Boiler Overhaul (720 Hours or Longer)	Maintenance Outage	

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.

**Duke Energy Progress
Base Load Power Plant
Performance Review Plan
October 2019**

Sutton Energy Complex

Unit	Duration of Outage	Type of Outage	Cause of Outage		Reason Outage Occurred	Remedial Action Taken
1A	10/30/2019 11:38:00 PM To 11/4/2019 9:09:00 AM	Sch	6299	Other Combined Cycle Problems	Replacing 115KV Disconnects downstream of GSU and SS Transformers.	
1B	10/6/2019 3:29:00 AM To 10/7/2019 9:50:00 AM	Unsch	5075	Blade Path Temperature Spread	Tripped due to high Blade Path Spread	
1B	10/26/2019 12:42:00 AM To 11/3/2019 9:32:00 AM	Sch	6299	Other Combined Cycle Problems	Replacing 230KV Disconnects downstream of GSU and SS Transformers.	
ST1	10/26/2019 12:16:00 AM To 11/3/2019 6:00:00 PM	Sch	6299	Other Combined Cycle Problems	Replacing 230KV Disconnects downstream of STG GSU	

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.

**Duke Energy Progress
Base Load Power Plant Performance Review Plan**

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**October 2019
Brunswick Nuclear Station**

	<u>Unit 1</u>	<u>Unit 2</u>		
(A) MDC (mW)	938	932		
(B) Period Hours	744	744		
(C) Net Gen (mWh) and Capacity Factor (%)	707,871	101.43	698,709	100.76
(D) Net mWh Not Gen due to Full Schedule Outages	0	0.00	0	0.00
* (E) Net mWh Not Gen due to Partial Scheduled Outages	44	0.01	625	0.09
(F) Net mWh Not Gen due to Full Forced Outages	0	0.00	0	0.00
* (G) Net mWh Not Gen due to Partial Forced Outages	-10,043	-1.44	-5,926	-0.85
* (H) Net mWh Not Gen due to Economic Dispatch	0	0.00	0	0.00
* (I) Core Conservation	0	0.00	0	0.00
(J) Net mWh Possible in Period	697,872	100.00%	693,408	100.00%
(K) Equivalent Availability (%)		99.99		99.91
(L) Output Factor (%)		101.43		100.76
(M) Heat Rate (BTU/NkWh)		10,430		10,573

* Estimate
FOOTNOTE: D and F Include Ramping Losses

**Duke Energy Progress
Base Load Power Plant Performance Review Plan**

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**October 2019
Harris Nuclear Station**

Unit 1

(A) MDC (mW)	964	
(B) Period Hours	744	
(C) Net Gen (mWh) and Capacity Factor (%)	221,209	30.84
(D) Net mWh Not Gen due to Full Schedule Outages	460,664	64.23
* (E) Net mWh Not Gen due to Partial Scheduled Outages	35,343	4.93
(F) Net mWh Not Gen due to Full Forced Outages	0	0.00
* (G) Net mWh Not Gen due to Partial Forced Outages	0	0.00
* (H) Net mWh Not Gen due to Economic Dispatch	0	0.00
* (I) Core Conservation	0	0.00
(J) Net mWh Possible in Period	717,216	100.00%
(K) Equivalent Availability (%)		35.36
(L) Output Factor (%)		86.22
(M) Heat Rate (BTU/NkWh)		10,630

* Estimate

FOOTNOTE: D and F Include Ramping Losses

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**Duke Energy Progress
Base Load Power Plant Performance Review Plan**

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**October 2019
Robinson Nuclear Station**

Unit 2

(A) MDC (mW)	741	
(B) Period Hours	744	
(C) Net Gen (mWh) and Capacity Factor (%)	579,093	105.04
(D) Net mWh Not Gen due to Full Schedule Outages	0	0.00
* (E) Net mWh Not Gen due to Partial Scheduled Outages	0	0.00
(F) Net mWh Not Gen due to Full Forced Outages	0	0.00
* (G) Net mWh Not Gen due to Partial Forced Outages	-27,789	-5.04
* (H) Net mWh Not Gen due to Economic Dispatch	0	0.00
* (I) Core Conservation	0	0.00
(J) Net mWh Possible in Period	551,304	100.00%
(K) Equivalent Availability (%)		100.00
(L) Output Factor (%)		105.04
(M) Heat Rate (BTU/NkWh)		10,242

* Estimate

FOOTNOTE: D and F Include Ramping Losses

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**Duke Energy Progress
Base Load Power Plant
Performance Review Plan
October 2019**

Lee Energy Complex

	Unit 1A	Unit 1B	Unit 1C	Unit ST1	Block Total
(A) MDC (mW)	225	227	228	379	1,059
(B) Period Hrs	744	744	744	744	744
(C) Net Generation (mWh)	120,421	119,230	119,139	214,878	573,668
(D) Capacity Factor (%)	71.94	70.60	70.23	76.20	72.81
(E) Net mWh Not Generated due to Full Scheduled Outages	0	0	0	54,001	54,001
(F) Scheduled Outages: percent of Period Hrs	0.00	0.00	0.00	19.15	6.85
(G) Net mWh Not Generated due to Partial Scheduled Outages	20,426	21,197	21,477	301	63,401
(H) Scheduled Derates: percent of Period Hrs	12.20	12.55	12.66	0.11	8.05
(I) Net mWh Not Generated due to Full Forced Outages	278	53	783	0	1,113
(J) Forced Outages: percent of Period Hrs	0.17	0.03	0.46	0.00	0.14
(K) Net mWh Not Generated due to Partial Forced Outages	0	0	0	0	0
(L) Forced Derates: percent of Period Hrs	0.00	0.00	0.00	0.00	0.00
(M) Net mWh Not Generated due to Economic Dispatch	26,275	28,408	28,234	12,796	95,713
(N) Economic Dispatch: percent of Period Hrs	15.70	16.82	16.64	4.54	12.15
(O) Net mWh Possible in Period	167,400	168,888	169,632	281,976	787,896
(P) Equivalent Availability (%)	87.63	87.42	86.88	80.74	84.96
(Q) Output Factor (%)	77.68	76.64	77.16	94.26	82.78
(R) Heat Rate (BTU/NkWh)	9,143	9,295	9,238	4,546	7,472

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- (R) Includes Light Off BTU's

**Duke Energy Progress
Base Load Power Plant
Performance Review Plan
October 2019**

Richmond County Station

	Unit 7	Unit 8	Unit ST4	Block Total
(A) MDC (mW)	194	194	182	570
(B) Period Hrs	744	744	744	744
(C) Net Generation (mWh)	114,021	113,981	130,875	358,877
(D) Capacity Factor (%)	79.00	78.97	96.65	84.62
(E) Net mWh Not Generated due to Full Scheduled Outages	0	0	0	0
(F) Scheduled Outages: percent of Period Hrs	0.00	0.00	0.00	0.00
(G) Net mWh Not Generated due to Partial Scheduled Outages	14,880	15,252	4,836	34,968
(H) Scheduled Derates: percent of Period Hrs	10.31	10.57	3.57	8.25
(I) Net mWh Not Generated due to Full Forced Outages	0	0	0	0
(J) Forced Outages: percent of Period Hrs	0.00	0.00	0.00	0.00
(K) Net mWh Not Generated due to Partial Forced Outages	0	0	0	0
(L) Forced Derates: percent of Period Hrs	0.00	0.00	0.00	0.00
(M) Net mWh Not Generated due to Economic Dispatch	15,435	15,103	0	30,538
(N) Economic Dispatch: percent of Period Hrs	10.69	10.46	0.00	7.20
(O) Net mWh Possible in Period	144,336	144,336	135,408	424,080
(P) Equivalent Availability (%)	89.69	89.43	96.43	91.75
(Q) Output Factor (%)	79.00	78.97	96.65	84.62
(R) Heat Rate (BTU/NkWh)	11,850	11,425	0	7,394

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- (R) Includes Light Off BTU's

**Duke Energy Progress
Base Load Power Plant
Performance Review Plan
October 2019**

Richmond County Station

	Unit 9	Unit 10	Unit ST5	Block Total
(A) MDC (mW)	216	216	248	680
(B) Period Hrs	744	744	744	744
(C) Net Generation (mWh)	82,985	101,823	130,721	315,529
(D) Capacity Factor (%)	51.64	63.36	70.85	62.37
(E) Net mWh Not Generated due to Full Scheduled Outages	57,319	33,642	40,986	131,947
(F) Scheduled Outages: percent of Period Hrs	35.67	20.93	22.21	26.08
(G) Net mWh Not Generated due to Partial Scheduled Outages	10,051	12,059	13,060	35,171
(H) Scheduled Derates: percent of Period Hrs	6.25	7.50	7.08	6.95
(I) Net mWh Not Generated due to Full Forced Outages	0	0	0	0
(J) Forced Outages: percent of Period Hrs	0.00	0.00	0.00	0.00
(K) Net mWh Not Generated due to Partial Forced Outages	0	0	0	0
(L) Forced Derates: percent of Period Hrs	0.00	0.00	0.00	0.00
(M) Net mWh Not Generated due to Economic Dispatch	10,349	13,180	0	23,528
(N) Economic Dispatch: percent of Period Hrs	6.44	8.20	0.00	4.65
(O) Net mWh Possible in Period	160,704	160,704	184,512	505,920
(P) Equivalent Availability (%)	58.08	71.56	70.71	66.97
(Q) Output Factor (%)	80.27	80.78	91.08	84.60
(R) Heat Rate (BTU/NkWh)	11,769	11,618	0	6,845

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- (R) Includes Light Off BTU's

**Duke Energy Progress
Base Load Power Plant
Performance Review Plan
October 2019**

Sutton Energy Complex

	Unit 1A	Unit 1B	Unit ST1	Block Total
(A) MDC (mW)	224	224	271	719
(B) Period Hrs	744	744	744	744
(C) Net Generation (mWh)	114,957	101,496	131,153	347,606
(D) Capacity Factor (%)	68.98	60.90	65.05	64.98
(E) Net mWh Not Generated due to Full Scheduled Outages	5,458	32,099	38,952	76,509
(F) Scheduled Outages: percent of Period Hrs	3.28	19.26	19.32	14.30
(G) Net mWh Not Generated due to Partial Scheduled Outages	19,430	15,114	1,501	36,045
(H) Scheduled Derates: percent of Period Hrs	11.66	9.07	0.74	6.74
(I) Net mWh Not Generated due to Full Forced Outages	0	6,798	0	6,798
(J) Forced Outages: percent of Period Hrs	0.00	4.08	0.00	1.27
(K) Net mWh Not Generated due to Partial Forced Outages	0	0	4,191	4,191
(L) Forced Derates: percent of Period Hrs	0.00	0.00	2.08	0.78
(M) Net mWh Not Generated due to Economic Dispatch	26,811	11,148	25,827	63,786
(N) Economic Dispatch: percent of Period Hrs	16.09	6.69	12.81	11.92
(O) Net mWh Possible in Period	166,656	166,656	201,624	534,936
(P) Equivalent Availability (%)	85.07	67.59	77.86	76.90
(Q) Output Factor (%)	76.27	79.44	80.62	78.79
(R) Heat Rate (BTU/NkWh)	11,351	11,351	0	7,068

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- (R) Includes Light Off BTU's

**Duke Energy Progress
Baseload Power Plant
Performance Review Plan
October 2019**

**Pre-commercial Generation
Asheville Combined Cycle**

	Unit 5	Unit 7	Block Total
(A) MDC (mW)			
(B) Period Hrs			
(C) Net Generation (mWh)	6,054	2,498	8,552
(D) Capacity Factor (%)			
(E) Net mWh Not Generated due to Full Scheduled Outages			
(F) Scheduled Outages: percent of Period Hrs			
(G) Net mWh Not Generated due to Partial Scheduled Outages			
(H) Scheduled Derates: percent of Period Hrs			
(I) Net mWh Not Generated due to Full Forced Outages			
(J) Forced Outages: percent of Period Hrs			
(K) Net mWh Not Generated due to Partial Forced Outages			
(L) Forced Derates: percent of Period Hrs			
(M) Net mWh Not Generated due to Economic Dispatch			
(N) Economic Dispatch: percent of Period Hrs			
(O) Net mWh Possible in Period			
(P) Equivalent Availability (%)			
(Q) Output Factor (%)			
(R) Heat Rate (BTU/NkWh)			

Note: The Power Plant Performance Data reports are limited to capturing data beginning the first full month a station is in commercial operation. During the month specified above, Asheville CC produced pre-commercial generation.

**Duke Energy Progress
Intermediate Power Plant Performance
Review Plan
October 2019**

Mayo Station

Unit 1

(A) MDC (mW)	746
(B) Period Hrs	744
(C) Net Generation (mWh)	62,707
(D) Net mWh Possible in Period	555,024
(E) Equivalent Availability (%)	70.91
(F) Output Factor (%)	49.87
(G) Capacity Factor (%)	11.30

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.

**Duke Energy Progress
Intermediate Power Plant Performance
Review Plan
October 2019**

	Roxboro Station		
	Unit 2	Unit 3	Unit 4
(A) MDC (mW)	673	698	711
(B) Period Hrs	744	744	744
(C) Net Generation (mWh)	152,933	105,566	286,379
(D) Net mWh Possible in Period	500,712	519,312	528,984
(E) Equivalent Availability (%)	57.86	34.80	99.70
(F) Output Factor (%)	54.95	69.38	64.74
(G) Capacity Factor (%)	30.54	20.33	54.14

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.

**Duke Energy Progress
Base Load Power Plant Performance Review Plan**

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**November 2018 - October 2019
Brunswick Nuclear Station**

	<u>Unit 1</u>	<u>Unit 2</u>		
(A) MDC (mW)	938	932		
(B) Period Hours	8760	8760		
(C) Net Gen (mWh) and Capacity Factor (%)	7,740,940	94.21	6,922,410	84.79
(D) Net mWh Not Gen due to Full Schedule Outages	0	0.00	716,056	8.77
* (E) Net mWh Not Gen due to Partial Scheduled Outages	31,699	0.39	87,564	1.07
(F) Net mWh Not Gen due to Full Forced Outages	513,320	6.25	276,773	3.39
* (G) Net mWh Not Gen due to Partial Forced Outages	-69,079	-0.85	161,517	1.98
* (H) Net mWh Not Gen due to Economic Dispatch	0	0.00	0	0.00
* (I) Core Conservation	0	0.00	0	0.00
(J) Net mWh Possible in Period	8,216,880	100.00%	8,164,320	100.00%
(K) Equivalent Availability (%)		93.74		85.84
(L) Output Factor (%)		100.49		96.53
(M) Heat Rate (BTU/NkWh)		10,443		10,714

* Estimate
FOOTNOTE: D and F Include Ramping Losses

**Duke Energy Progress
Base Load Power Plant Performance Review Plan**

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**November 2018 - October 2019
Harris Nuclear Station**

Unit 1

(A) MDC (mW)	964	
(B) Period Hours	8760	
(C) Net Gen (mWh) and Capacity Factor (%)	8,060,707	95.99
(D) Net mWh Not Gen due to Full Schedule Outages	460,664	5.49
* (E) Net mWh Not Gen due to Partial Scheduled Outages	44,206	0.53
(F) Net mWh Not Gen due to Full Forced Outages	0	0.00
* (G) Net mWh Not Gen due to Partial Forced Outages	-167,817	-2.01
* (H) Net mWh Not Gen due to Economic Dispatch	0	0.00
* (I) Core Conservation	0	0.00
(J) Net mWh Possible in Period	8,397,760	100.00%
(K) Equivalent Availability (%)		94.50
(L) Output Factor (%)		101.52
(M) Heat Rate (BTU/NkWh)		10,275

* Estimate

FOOTNOTE: D and F Include Ramping Losses

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**Duke Energy Progress
Base Load Power Plant Performance Review Plan**

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**November 2018 - October 2019
Robinson Nuclear Station**

Unit 2

(A) MDC (mW)	741	
(B) Period Hours	8760	
(C) Net Gen (mWh) and Capacity Factor (%)	5,802,149	89.39
(D) Net mWh Not Gen due to Full Schedule Outages	457,716	7.05
* (E) Net mWh Not Gen due to Partial Scheduled Outages	81,681	1.26
(F) Net mWh Not Gen due to Full Forced Outages	408,699	6.30
* (G) Net mWh Not Gen due to Partial Forced Outages	-259,085	-4.00
* (H) Net mWh Not Gen due to Economic Dispatch	0	0.00
* (I) Core Conservation	0	0.00
(J) Net mWh Possible in Period	6,491,160	100.00%
(K) Equivalent Availability (%)		85.23
(L) Output Factor (%)		103.15
(M) Heat Rate (BTU/NkWh)		10,306

* Estimate
FOOTNOTE: D and F Include Ramping Losses

**Duke Energy Progress
Base Load Power Plant
Performance Review Plan
November, 2018 through October, 2019**

Lee Energy Complex

	Unit 1A	Unit 1B	Unit 1C	Unit ST1	Block Total
(A) MDC (mW)	225	227	228	379	1,059
(B) Period Hrs	8,760	8,760	8,760	8,760	8,760
(C) Net Generation (mWh)	1,395,235	1,388,899	1,404,233	2,766,047	6,954,414
(D) Capacity Factor (%)	70.79	69.85	70.31	83.31	74.97
(E) Net mWh Not Generated due to Full Scheduled Outages	111,997	126,753	133,053	255,383	627,187
(F) Scheduled Outages: percent of Period Hrs	5.68	6.37	6.66	7.69	6.76
(G) Net mWh Not Generated due to Partial Scheduled Outages	254,965	262,896	266,804	37,554	822,219
(H) Scheduled Derates: percent of Period Hrs	12.94	13.22	13.36	1.13	8.86
(I) Net mWh Not Generated due to Full Forced Outages	37,526	40,569	40,436	67,923	186,454
(J) Forced Outages: percent of Period Hrs	1.90	2.04	2.02	2.05	2.01
(K) Net mWh Not Generated due to Partial Forced Outages	0	0	0	3,860	3,860
(L) Forced Derates: percent of Period Hrs	0.00	0.00	0.00	0.12	0.04
(M) Net mWh Not Generated due to Economic Dispatch	171,276	169,403	152,754	189,274	682,707
(N) Economic Dispatch: percent of Period Hrs	8.69	8.52	7.65	5.70	7.36
(O) Net mWh Possible in Period	1,971,000	1,988,520	1,997,280	3,320,040	9,276,840
(P) Equivalent Availability (%)	79.48	78.36	77.96	89.01	82.32
(Q) Output Factor (%)	78.49	76.94	77.66	92.37	82.93
(R) Heat Rate (BTU/NkWh)	9,050	9,172	9,110	4,493	7,274

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- (R) Includes Light Off BTU's

**Duke Energy Progress
Base Load Power Plant
Performance Review Plan
November, 2018 through October, 2019**

Richmond County Station

	Unit 7	Unit 8	Unit ST4	Block Total
(A) MDC (mW)	193	193	181	567
(B) Period Hrs	8,760	8,760	8,760	8,760
(C) Net Generation (mWh)	1,252,524	1,254,075	1,419,012	3,925,611
(D) Capacity Factor (%)	74.02	74.11	89.58	79.01
(E) Net mWh Not Generated due to Full Scheduled Outages	77,480	64,482	60,727	202,690
(F) Scheduled Outages: percent of Period Hrs	4.58	3.81	3.83	4.08
(G) Net mWh Not Generated due to Partial Scheduled Outages	198,618	204,371	62,912	465,902
(H) Scheduled Derates: percent of Period Hrs	11.74	12.08	3.97	9.38
(I) Net mWh Not Generated due to Full Forced Outages	18,725	22,175	6,133	47,034
(J) Forced Outages: percent of Period Hrs	1.11	1.31	0.39	0.95
(K) Net mWh Not Generated due to Partial Forced Outages	0	0	18,781	18,781
(L) Forced Derates: percent of Period Hrs	0.00	0.00	1.19	0.38
(M) Net mWh Not Generated due to Economic Dispatch	144,767	147,011	16,498	308,277
(N) Economic Dispatch: percent of Period Hrs	8.56	8.69	1.04	6.20
(O) Net mWh Possible in Period	1,692,115	1,692,115	1,584,065	4,968,295
(P) Equivalent Availability (%)	82.63	82.85	90.67	85.22
(Q) Output Factor (%)	78.93	78.98	94.08	83.83
(R) Heat Rate (BTU/NkWh)	11,484	11,233	0	7,253

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- (R) Includes Light Off BTU's

**Duke Energy Progress
Base Load Power Plant
Performance Review Plan
November, 2018 through October, 2019**

Richmond County Station

	Unit 9	Unit 10	Unit ST5	Block Total
(A) MDC (mW)	216	216	248	680
(B) Period Hrs	8,760	8,760	8,760	8,760
(C) Net Generation (mWh)	1,182,853	1,203,187	1,581,550	3,967,590
(D) Capacity Factor (%)	62.51	63.59	72.80	66.61
(E) Net mWh Not Generated due to Full Scheduled Outages	382,370	375,646	464,099	1,222,115
(F) Scheduled Outages: percent of Period Hrs	20.21	19.85	21.36	20.52
(G) Net mWh Not Generated due to Partial Scheduled Outages	170,012	165,189	13,060	348,261
(H) Scheduled Derates: percent of Period Hrs	8.99	8.73	0.60	5.85
(I) Net mWh Not Generated due to Full Forced Outages	112	1,001	26,135	27,247
(J) Forced Outages: percent of Period Hrs	0.01	0.05	1.20	0.46
(K) Net mWh Not Generated due to Partial Forced Outages	0	0	1,144	1,144
(L) Forced Derates: percent of Period Hrs	0.00	0.00	0.05	0.02
(M) Net mWh Not Generated due to Economic Dispatch	156,813	147,138	86,492	390,443
(N) Economic Dispatch: percent of Period Hrs	8.29	7.78	3.98	6.55
(O) Net mWh Possible in Period	1,892,160	1,892,160	2,172,480	5,956,800
(P) Equivalent Availability (%)	70.80	71.36	76.78	73.16
(Q) Output Factor (%)	82.36	82.49	95.17	87.07
(R) Heat Rate (BTU/NkWh)	11,432	11,361	0	6,853

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- (R) Includes Light Off BTU's

**Duke Energy Progress
Base Load Power Plant
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Sutton Energy Complex

	Unit 1A	Unit 1B	Unit ST1	Block Total
(A) MDC (mW)	224	224	271	719
(B) Period Hrs	8,760	8,760	8,760	8,760
(C) Net Generation (mWh)	1,344,375	1,324,263	1,501,505	4,170,143
(D) Capacity Factor (%)	68.51	67.49	63.25	66.21
(E) Net mWh Not Generated due to Full Scheduled Outages	92,094	105,370	176,823	374,286
(F) Scheduled Outages: percent of Period Hrs	4.69	5.37	7.45	5.94
(G) Net mWh Not Generated due to Partial Scheduled Outages	265,928	251,901	32,455	550,284
(H) Scheduled Derates: percent of Period Hrs	13.55	12.84	1.37	8.74
(I) Net mWh Not Generated due to Full Forced Outages	2,923	53,954	266,696	323,573
(J) Forced Outages: percent of Period Hrs	0.15	2.75	11.23	5.14
(K) Net mWh Not Generated due to Partial Forced Outages	0	0	16,108	16,108
(L) Forced Derates: percent of Period Hrs	0.00	0.00	0.68	0.26
(M) Net mWh Not Generated due to Economic Dispatch	256,920	226,752	380,373	864,045
(N) Economic Dispatch: percent of Period Hrs	13.09	11.56	16.02	13.72
(O) Net mWh Possible in Period	1,962,240	1,962,240	2,373,960	6,298,440
(P) Equivalent Availability (%)	81.61	79.04	79.27	79.93
(Q) Output Factor (%)	77.36	77.82	78.03	77.75
(R) Heat Rate (BTU/NkWh)	11,443	11,420	0	7,316

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- (R) Includes Light Off BTU's

**Duke Energy Progress
Baseload Power Plant
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**Pre-commercial Generation
Asheville Combined Cycle**

	Unit 5	Unit 7	Block Total
(A) MDC (mW)			
(B) Period Hrs			
(C) Net Generation (mWh)	21,464	13,321	34,785
(D) Capacity Factor (%)			
(E) Net mWh Not Generated due to Full Scheduled Outages			
(F) Scheduled Outages: percent of Period Hrs			
(G) Net mWh Not Generated due to Partial Scheduled Outages			
(H) Scheduled Derates: percent of Period Hrs			
(I) Net mWh Not Generated due to Full Forced Outages			
(J) Forced Outages: percent of Period Hrs			
(K) Net mWh Not Generated due to Partial Forced Outages			
(L) Forced Derates: percent of Period Hrs			
(M) Net mWh Not Generated due to Economic Dispatch			
(N) Economic Dispatch: percent of Period Hrs			
(O) Net mWh Possible in Period			
(P) Equivalent Availability (%)			
(Q) Output Factor (%)			
(R) Heat Rate (BTU/NkWh)			

Note: The Power Plant Performance Data reports are limited to capturing data beginning the first full month a station is in commercial operation. During the months specified above, Asheville CC produced pre-commercial generation.

**Duke Energy Progress
Intermediate Power Plant
Performance Review Plan
November, 2018 through October, 2019**

Mayo Station

Units	Unit 1
(A) MDC (mW)	746
(B) Period Hrs	8,760
(C) Net Generation (mWh)	1,585,672
(D) Net mWh Possible in Period	6,534,960
(E) Equivalent Availability (%)	79.14
(F) Output Factor (%)	46.89
(G) Capacity Factor (%)	24.26

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.

**Duke Energy Progress
Intermediate Power Plant
Performance Review Plan
November, 2018 through October, 2019**

Roxboro Station

Units	Unit 2	Unit 3	Unit 4
(A) MDC (mW)	673	698	711
(B) Period Hrs	8,760	8,760	8,760
(C) Net Generation (mWh)	1,553,280	2,013,936	2,612,582
(D) Net mWh Possible in Period	5,895,480	6,114,480	6,228,360
(E) Equivalent Availability (%)	81.52	70.34	77.62
(F) Output Factor (%)	62.62	59.71	65.12
(G) Capacity Factor (%)	26.35	32.94	41.95

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.

Duke Energy Progress
Outages for 100 mW or Larger Units
October, 2019

<u>Unit Name</u>	<u>Capacity Rating (mW)</u>	<u>Full Outage Hours</u>		<u>Total</u>
		<u>Scheduled</u>	<u>Unscheduled</u>	
Brunswick 1	938	0.00	0.00	0.00
Brunswick 2	932	0.00	0.00	0.00
Harris 1	964	477.87	0.00	477.87
Robinson 2	741	0.00	0.00	0.00

Duke Energy Progress
Outages for 100 mW or Larger Units
October 2019

Unit Name	Capacity Rating (mW)	Full Outage Hours		Total Outage Hours
		Scheduled	Unscheduled	
Asheville Steam 1	192	0.00	0.00	0.00
Asheville Steam 2	192	0.00	0.00	0.00
Asheville CT 3	185	64.22	0.00	64.22
Asheville CT 4	185	59.47	0.00	59.47
Darlington CT 12	133	0.00	0.00	0.00
Darlington CT 13	133	370.17	0.00	370.17
Lee Energy Complex CC 1A	225	0.00	1.23	1.23
Lee Energy Complex CC 1B	227	0.00	0.23	0.23
Lee Energy Complex CC 1C	228	0.00	3.43	3.43
Lee Energy Complex CC ST1	379	142.48	0.00	142.48
Mayo Steam 1	746	216.43	0.00	216.43
Richmond County CT 1	189	0.00	0.00	0.00
Richmond County CT 2	187	207.82	0.00	207.82
Richmond County CT 3	185	163.08	0.00	163.08
Richmond County CT 4	186	0.00	0.00	0.00
Richmond County CT 6	187	567.67	0.00	567.67
Richmond County CC 7	194	0.00	0.00	0.00
Richmond County CC 8	194	0.00	0.00	0.00
Richmond County CC ST4	182	0.00	0.00	0.00
Richmond County CC 9	216	265.37	0.00	265.37
Richmond County CC 10	216	155.75	0.00	155.75
Richmond County CC ST5	248	165.27	0.00	165.27

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.

Duke Energy Progress
Outages for 100 mW or Larger Units
October 2019

Unit Name	Capacity Rating (mW)	Full Outage Hours		Total Outage Hours
		Scheduled	Unscheduled	
Roxboro Steam 1	380	744.00	0.00	744.00
Roxboro Steam 2	673	312.00	0.00	312.00
Roxboro Steam 3	698	474.65	0.00	474.65
Roxboro Steam 4	711	0.00	0.00	0.00
Sutton Energy Complex CC 1A	224	24.37	0.00	24.37
Sutton Energy Complex CC 1B	224	143.30	30.35	173.65
Sutton Energy Complex CC ST1	271	143.73	0.00	143.73
Wayne County CT 10	192	53.72	0.00	53.72
Wayne County CT 11	192	128.67	1.22	129.88
Wayne County CT 12	193	136.43	1.22	137.65
Wayne County CT 13	191	0.00	1.22	1.22
Wayne County CT 14	195	303.83	0.00	303.83

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.